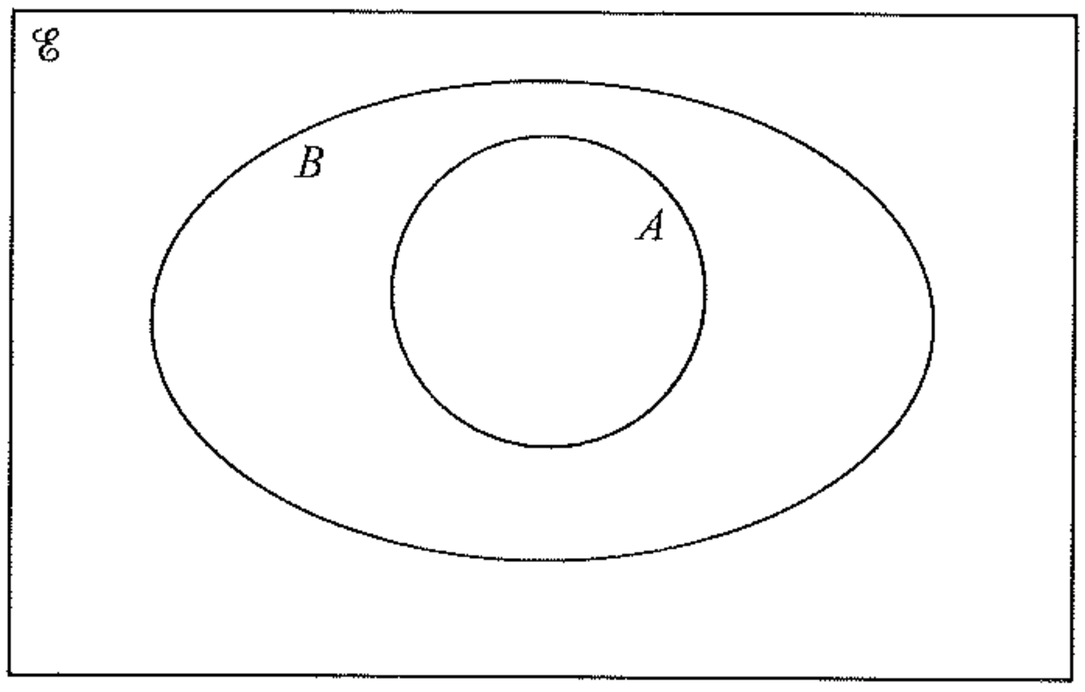
IGCSE Mathematics – VENN DIAGRAMS

Oct 04 Paper 2

11 $\mathscr{E} = \{40, 41, 42, 43, 44, 45, 46, 47, 48, 49\}$
$A = \{\text{prime numbers}\}$
$B = \{\text{odd numbers}\}$

(a) Place the 10 numbers in the correct places on the Venn diagram.



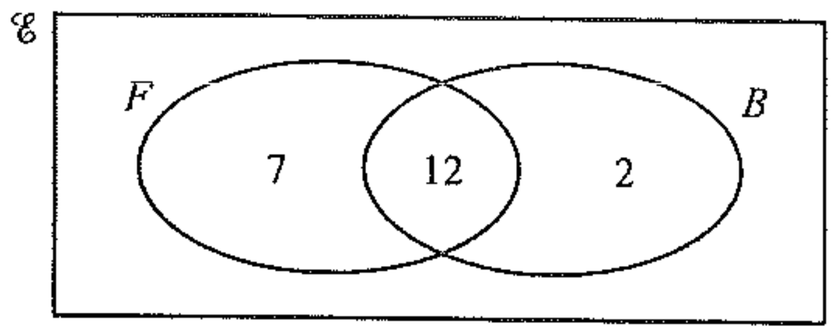
[2]

(b) State the value of $n(B \cap A')$.

Answer(b) ..... [1]

Oct 05 Paper 4

4 **(a)** All 24 students in a class are asked whether they like football and whether they like basketball.
Some of the results are shown in the Venn diagram below.



$\mathscr{E} = \{\text{students in the class}\}$.
$F = \{\text{students who like football}\}$.
$B = \{\text{students who like basketball}\}$.

(i) How many students like both sports? [1]

(ii) How many students do not like either sport? [1]

(iii) Write down the value of $n(F \cup B)$. [1]

(iv) Write down the value of $n(F' \cap B)$. [1]

(v) A student from the class is selected at random.
What is the probability that this student likes basketball? [1]

(vi) A student who likes football is selected at random.
What is the probability that this student likes basketball? [1]

(b) Two students are selected at random from a group of 10 boys and 12 girls.
Find the probability that

(i) they are both girls, [2]

(ii) one is a boy and one is a girl. [3]